

# Driver Championship

## Written Examination

Date \_\_\_\_\_

Name \_\_\_\_\_

### INSTRUCTIONS

**One hour** is allowed for this examination.

The examination consists of 50 true-false and multiple choice questions:

True-False-- place **T** or **F** in blank and mark the scan form – **(a)** for true or **(b)** for false  
Multiple Choice-- place **a, b, c,** or **d** in blank and mark the scan form

One point will be given for each correct answer.

Choose the best answer of the choices provided.

## *Driver Championship Exam*

### **Product Knowledge**

- 1) The chemical reaction that occurs when cement and water are combined is called?
  - a) Hydration
  - b) Water/cement ratio
  - c) Atomic Number
  - d) Evaporation
  
- 2) What type of strength describes the crushing force that may be applied to concrete before it breaks?
  - a) Flexural
  - b) Compressive
  - c) Permeability
  - d) Shrinkage
  
- 3) What is the best indicator of lightweight concrete?
  - a) Air content
  - b) Setting time
  - c) Slump
  - d) Unit weight
  
- 4) What type of cement is classified as “general use”?
  - a) Type IV
  - b) Type II
  - c) Type V
  - d) Type I
  
- 5) What admixture is most often used to make concrete usable in hot weather?
  - a) Silica fume

- b) Air entraining
- c) Superplasticizers
- d) Set retarders

6) According to ASTM standards, what method is used to determine yield.

- a) Unit Wt.
- b) Slump
- c) Air Content
- d) Cylinders

7) What type of plant includes a stationary mixer that blends the concrete materials before discharge into the truck mixer?

- a) Dry batch
- b) Slurry
- c) Truck mixed
- d) Central

8) About how long does it take most truck mixers to mix a load to 75 revolutions at 15 rpms?

- a) Two minutes
- b) Eight minutes
- c) Five minutes
- d) None of the above

9) The recommended number of drum revolutions to properly mix a transit-mixed load of concrete is 70 - 100 revolutions.

- a) True
- b) False

10) What is the appearance of pockets of coarse aggregate separated from the mortar in hardened concrete called?

- a) Floating
- b) Curling
- c) Plastic shrinkage

d) Honeycombing

11) On hot, dry, windy days when the surface of the plastic concrete dries and shrinks quickly, cracks can form because of:

- a) Plastic shrinkage
- b) Drying shrinkage
- c) Curing
- d) Strength gain

12) A Chase indicator can be used to accept or reject a load on the basis of water cement ratio.

- a) True
- b) False

13) When making 6x12" concrete strength cylinders, what is the minimum sample size that must be taken?

- a) One-half cubic foot
- b) One cubic foot
- c) Two cubic feet
- d) There is no minimum sample size

## Environmental

14) There are no regulations that govern how water is allowed to flow off concrete plant sites.

- a) True
- b) False

15) The pH level of concrete washout water is most likely to be about....?

- a) 1-3
- b) 3-5
- c) 6-9
- d) 9-12

16) How much water should the mixer driver normally have to use to complete jobsite chute rinse off?

- a) 2 gallons
- b) 15 gallons
- c) 50 gallons
- d) 100 gallons

17) What type of water would be considered process water?

- a) Water used to rinse the chutes off after loading
- b) Stormwater
- c) Water used to wash down the shop repair floor
- d) Both A & C

18) Too much water used during mixer washout can actually interfere with good drum cleaning.

- a) True
- b) False

19) Any water that comes into contact with portland cement would be considered to be process water.

- a) True
- b) False

20) In general, which of the following materials is regulated under SPCC regulations?

- a) Admixtures
- b) Fuel
- c) Cement
- d) Silica Fume

## Customer & Company Relations

- 21) The mixer driver should not treat a COD customer any differently than a commercial contractor, because all customers deserve to be treated alike.
- a) True
  - b) False
- 22) Which type of customer may have little or no knowledge of concrete quality, and is looking for a friendly, caring delivery person?
- a) Residential contractor
  - b) Light commercial contractor
  - c) Heavy commercial contractor
  - d) Homeowner
- 23) Which of the following is a good way of dealing with customer problems?
- a) Document all complaints the customer may have
  - b) Assume that a customer's complaints are not valid because they complain all the time
  - c) Tell the customer what you can do, and make sure he knows who controls the concrete
  - d) Apologize to the customer for any problem and accept responsibility
- 24) It is one of the responsibility of the mixer driver to communicate safety information to the customer.
- a) True
  - b) False
- 25) If the mixer driver is asked to deliver where it appears unsafe, the driver should contact dispatch before continuing.
- a) True
  - b) False

26) What statement is NOT true about the relationship between the dispatcher and the mixer driver?

- a) The relationship must be built on mutual respect and trust.
- b) There must be a high degree of communication
- c) Problems between dispatch and the mixer driver should be resolved as soon as possible
- d) Customer service is not affected by the relationship between dispatchers and the mixer drivers.

27) The mixer driver can help the company succeed by doing their job to the best of their abilities, but never help others do their job as well.

- a) True
- b) False



## Safety

28) This hazard communication sheet gives information on materials and chemical that could be harmful:

- a) EPA
- b) SDS
- c) DOT
- d) NRMCA

29) Which of the following is a proper way to lift an object?

- a) Always twist while lifting
- b) Lift with a steady, even motion
- c) Keep the back in the “bent” position

30) OSHA requires all employees to develop a program to inform employees and the public of any chemical hazards in the workplace. This program is called:

- a) Spill Prevention and Countermeasures Plan
- b) Resource Conservation and Recovery Act
- c) Hazard Communication Program
- d) None of the above

31) The three-point rule is a procedure the mixer driver should use to inspect the load for slump, temperature and air content.

- a) True
- b) False

32) What is the OSHA regulation designed to prevent personal injury and property damage caused by starting up a machine or piece of equipment while it is being worked on or repaired?

- a) Confined space
- b) Respirator protection
- c) Hazard communication
- d) Lockout/tagout

- 33) Which of the following statement about safe drum cleaning procedures is NOT correct?
- a) Cement burns cannot occur while cleaning hardened concrete from a truck mixer drum
  - b) The drum must be secured and unable to rotate or turn
  - c) The truck mixer must be locked out before entering the drum
  - d) Do not chip inside a drum while hardened concrete is overhead

- 34) Of the choices listed, what should the mixer driver NOT do at the scene of an accident?
- a) Give details of the accident to a police officer or company manager
  - b) Record any visible damage to other vehicles that were involved
  - c) Sign a statement describing the accident for the other party's insurance company
  - d) Secure the area by putting out warning flares and triangles

- 35) What is the cause of most injuries in a truck mixer rollover?
- a) Flying glass from windshield
  - b) Collision with the steering wheel
  - c) Flying objects in the truck cab
  - d) Lack of seat belt use

- 36) Too much pressure on a booster axle can shift the center of gravity of a truck mixer and cause a rollover.
- a) True
  - b) False

- 37) Drivers should inspect their trucks before and after every shift?.
- a) True
  - b) False

### Vehicle Maintenance & Operation

- 38) The steering wheel of a mixer truck should have less than how many inches of play?
- a) One inch
  - b) Two inches
  - c) Three Inches
  - d) None of the above
- 39) What is the pressure level that the air compressor should cut off at?
- a) About 60 psi
  - b) About 160 psi**
  - c) About 180 psi
  - d) None of the above
- 40) The typical allowable range of clutch free-play is one to two inches.
- a) True
  - b) False
- 41) The minimum tread depth on steering tires in the deepest groove is 10/32 of an inch.
- a) True
  - b) False
- 42) When a truck is losing air pressure, the parking brake control knob should engage at approximately 15 psi.
- a) True
  - b) False
- 43) The truck mixer steering wheel should have no more than 60 degrees of play, or four inches of free movement.
- a) True

b) False

44) What is the maximum amount of play there should be in the front brake slack adjuster?

- a) One inch
- b) Two inches
- c) Three inches
- d) There should be no play

45) The minimum tread depth on non-steering tires in the deepest groove is 2/32 of an inch.

- a) True
- b) False

46) The truck mixer control should not be left in the mixing position prior to starting the pre-trip inspection.

- a) True
- b) False

47) What is the first sign that the mixer driver might find during the walk-around inspection to indicate that the wheel lug nuts might be loose?

- a) Loud noises while driving at low speeds
- b) Broken horn
- c) Broken head lamp
- d) Rust on the wheel at the lug nut

48) When are brakes visually checked during the pre-trip inspection?

- a) During the engine compartment check
- b) During the walk-around inspection
- c) Brakes cannot be checked visually
- d) During the last step while checking air pressures

49) When entering a jobsite liftable axles should be.

- a) Lowered
- b) Raised
- c) Set a 50 psi

50) Engines running at high temperature can suffer a problem called heat stress:

- a) True
- b) False